

WHAT IS CLAIMED IS:

1 1. A thermal and moisture barrier for use with a
2 specialized heating and humidifying apparatus having a bed
3 portion used in the care of a neonatal infant comprising;

4 a substantially flexible cover defining when placed
5 over the bed an enclosure to accommodate a neonatal infant;
6 and

7 at least one opening located through the cover and
8 permitting manual access into the enclosure.

1 2. The barrier of claim 1, wherein the at least
2 one opening has a diaphragm providing a manually penetrable
3 closure.

1 3. The barrier of claim 2, wherein the diaphragm
2 comprises a resiliently flexible material extending across the
3 opening and having slits therein.

1 4. The barrier of claim 3, wherein the slits
2 extend radially outward having a common junction point located
3 substantially centrally of the flexible opening.

1 5. The barrier of claim 1, further comprising a
2 layer of flexible material positioned proximate to the opening
3 which overlaps the opening to form a seal.

1 6. The barrier of claim 1, wherein the cover is
2 formed from a substantially rectangular sheet, the sheet being
3 pivotally coupled by a flexible seam at each of its edges to
4 flap portions, the sheet being substantially the same size as
5 an open bedding portion of a radiant warmer such that the flap
6 portions overhang side panels of the radiant warmer and create
7 a substantially enclosed environment.

1 7. The barrier of claim 1, wherein the cover
2 defines a tetrahedral enclosure, the cover further comprising
3 an edge portion that creates a seal.

1 8. The barrier of claim 1, wherein the cover
2 defines a half section of a truncated right circular cylinder
3 enclosure, the cover further comprising an edge portion that
4 creates a seal.

1 8. The barrier of claim 1, wherein the cover
2 comprises an optically transparent material.

1 10. In an infant radiant warmer comprising a
2 bassinet assembly and a plurality of optically transparent
3 side panels surrounding a mattress upon which an infant can be
4 placed, the improvement comprising:

5 a substantially flexible cover defining an enclosure
6 when disposed over the mattress to accommodate a neonatal
7 infant; and

8 at least one opening located through the cover and
9 permitting manual access into the enclosure.

1 11. The improved radiant warmer of claim 10, having
2 a diaphragm providing a manually penetrable closure of the at
3 least one flexible opening.

1 12. The improved radiant warmer of claim 11,
2 wherein the diaphragm comprises a resiliently flexible sheet
3 extending across the opening and having slits extending
4 radially outward having a common junction point located
5 substantially centrally of the flexible opening.

1 13. The improved radiant warmer of claim 11,
2 wherein the diaphragm comprises a superposed sheet of flexible
3 material for covering the diaphragm when not in use.

1 14. The improved radiant warmer of claim 10,
2 wherein the cover defines a substantially rectangular sheet,
3 the sheet having a flexible seam at each of its edges coupled
4 to flap portions, wherein the flap portions overhang the side
5 panels and create a substantially enclosed environment.

1 15. The improved radiant warmer of claim 10,
2 wherein the cover defines a section of a portion of a right
3 circular cylinder enclosure, the cover further comprising an
4 edge portion that creates a seal with the mattress.

1 16. The improved radiant warmer of claim 10,
2 wherein the cover defines a tetrahedral enclosure, the cover
3 further comprising an edge portion that creates a seal with
4 the mattress.

1 17. In an incubator comprising an incubation
2 chamber, optically transparent side walls having armholes
3 therein, surrounding a mattress upon which an infant can be
4 placed, the improvement comprising:

5 a substantially flexible cover defining an enclosure
6 when disposed over the mattress to accommodate a neonatal
7 infant, wherein the cover comprises an edge portion that
8 creates a seal with the mattress providing a neutral thermal
9 environment therein; and

10 a plurality of flexible openings located on a
11 portion of the cover and communicating with the enclosure,
12 wherein the openings have a diaphragm comprising a resiliently
13 flexible sheet extending across the opening and having slits
14 extending radially outward having a common junction point
15 located substantially centrally of the flexible opening which
16 provide closure to preserve the neutral thermal and humidified
17 environment.

1 18. A method for providing a thermal and moisture
2 barrier for use with a specialized heating and humidifying
3 apparatus having a bed portion used in the care of a neonatal
4 infant comprising the steps of:

5 covering the infant with a substantially flexible
6 cover which defines an enclosure when placed over the bed
7 portion; and

8 permitting manual access into the enclosure through
9 at least one opening located through the cover.

1 19. The method of claim 18, wherein the at least
2 one opening has a manually penetrable diaphragm providing
3 closure to the opening.

1 20. The method of claim 18, wherein the cover is
2 formed from a substantially rectangular sheet, the sheet being
3 pivotally coupled by a flexible seam at each of its edges to
4 flap portions, the sheet being substantially the same size as
5 an open bedding portion of a radiant warmer such that the flap
6 portions overhang side panels of the radiant warmer and create
7 a substantially enclosed environment.

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